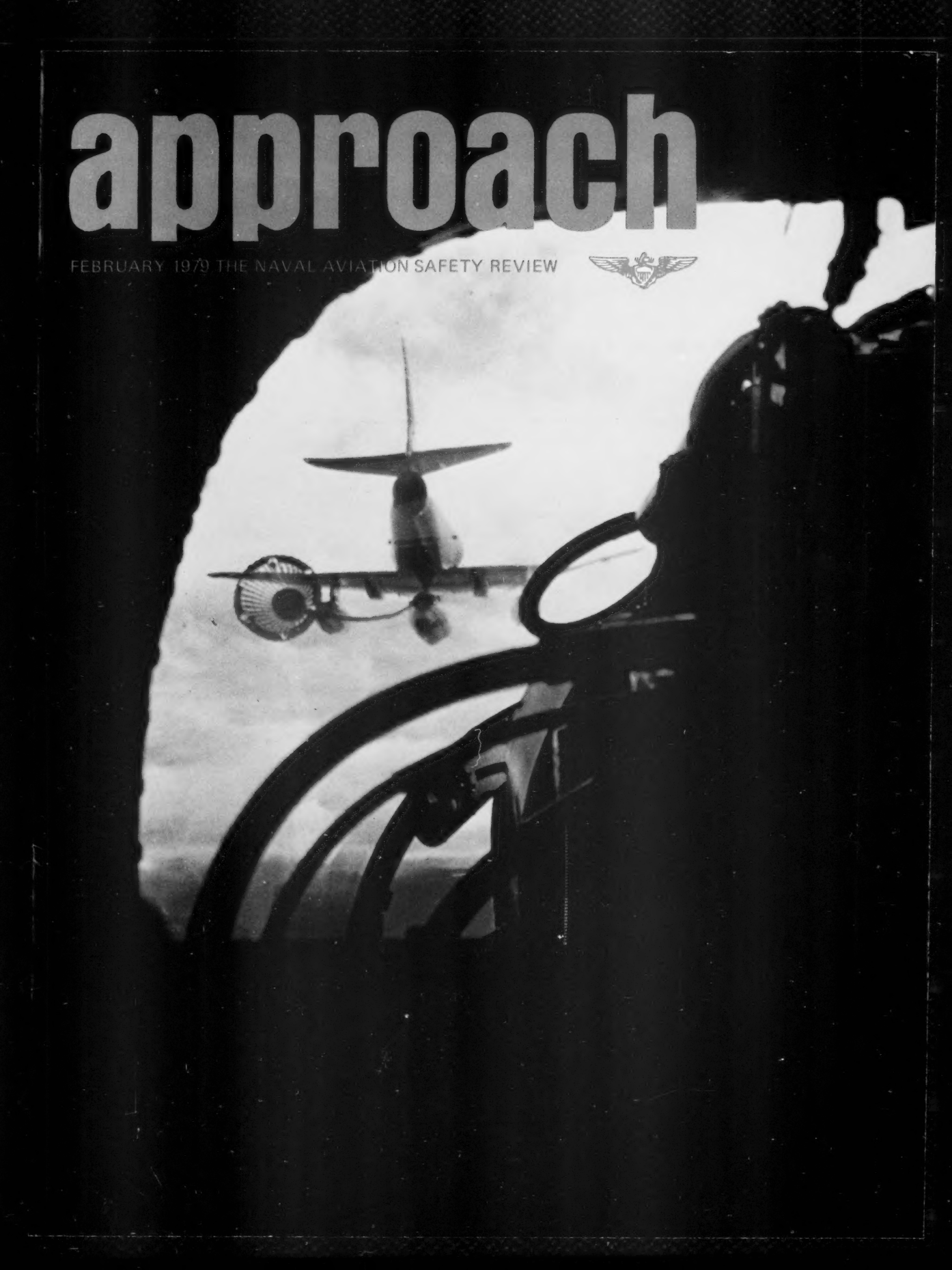
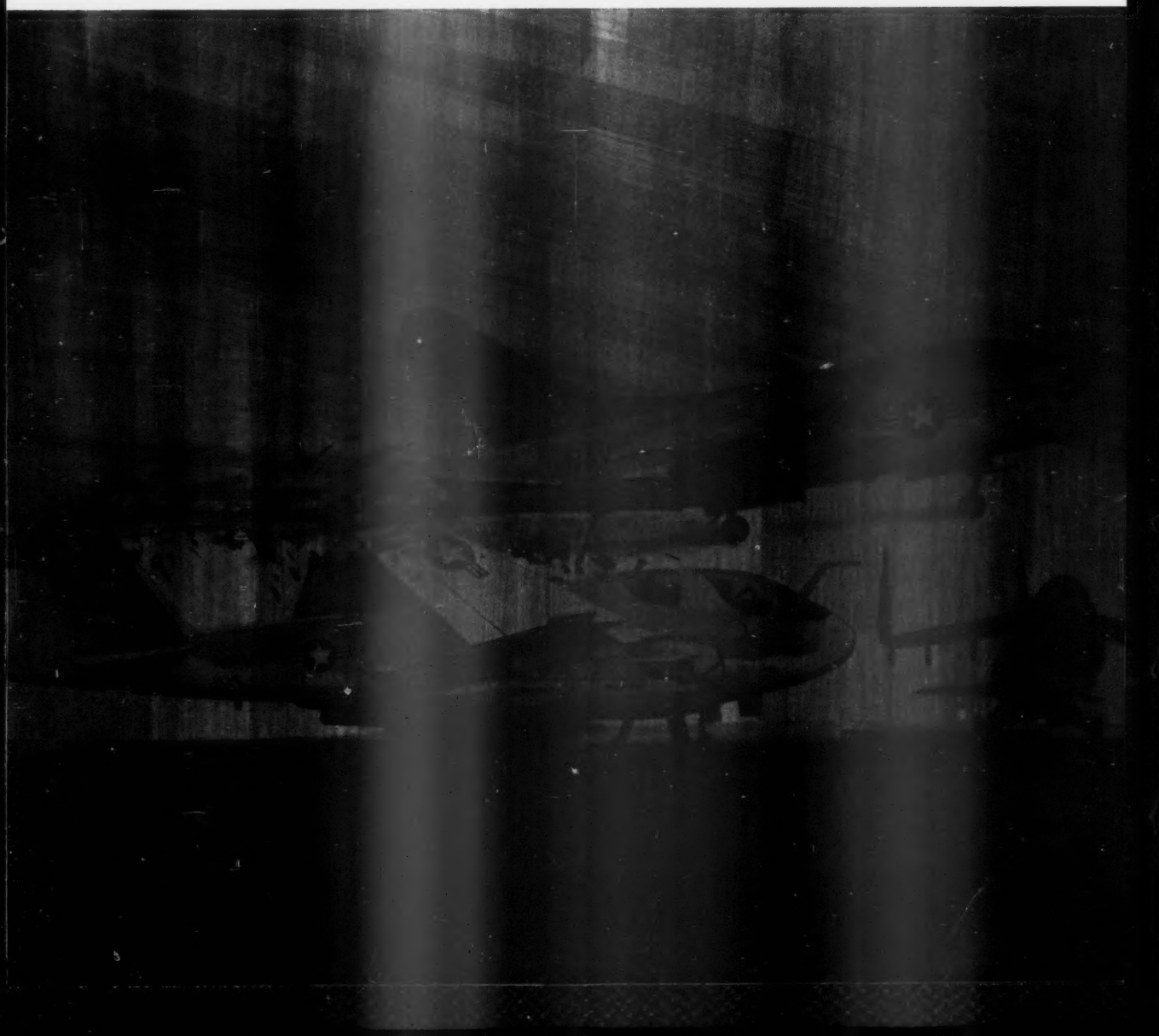
approach

FEBRUARY 1979 THE NAVAL AVIATION SAFETY REVIEW



"Hey, Paddles, there are no lights



CB^X (communications breakdowns) + A^X (assumptions) + U^X (unknowns) = CR^X (catastrophic results)! Consider the equation and relate it to this article and come up with your own solution(s) to the problem. As you progress through the sequence of events, you'll no doubt see where this accident could and should have been prevented.

down there!"

(or are there?)

THE pilot in Foxtrot Charlie 325 was returning to the USS NOT-SO-READY from the beach for night requals. He had made several landings aboard the carrier earlier that day and now was ready for what he thought were to be – routine night traps. The launch was scheduled at dusk to coincide with a Charlie time of 1815 on this ideal midwinter night's dream for flight ops. The weather was high scattered-to-broken, visibility good, and the sea state low. The pilot of FC-325 was well qualified and highly experienced in type – particularly at carrier ops. He had over 5000 hours, nearly 1000 traps (200 at night). All went well until the aircraft entered Marshal. Then some of the above equation's knowns and unknowns began to surface. Some minor; others major. All played a part in the outcome of this catastrophe.

FC-325 reported at Marshal that his DME was inoperative and the aircraft's instrument panel lights had failed. He did have the use of the red floodlights and his personal flashlight should the daylight disappear before trapping. CATCC relayed this info to the CO on the bridge, and the decision to bring 325 aboard was approved. At that time, CATCC was advised that launch ops were still in progress and recovery would be delayed 5 minutes. Charlie was now set at 1820. FC-325 was already committed as No. 1 for recovery, but with the delay, a waveoff was inevitable. The decision was made to sequence FC-314 in front of 325 in order that the latter be assured the chance of a first approach/trap, thus taking advantage of the waning daylight. A 360-degree turn allowed 314 to precede 325, and FC-320 was S-turned in the groove to gain separation on 325. The sequence was now set. FC-314, FC-325, and FC-320 were out of Marshal and headed down the chute for approach and trap.

FC-314 flew a complete CCA on frequency A and was told to call the Ball. At three-quarters of a mile he executed his own waveoff because the LAL (landing area lights) and OLS (optical landing system) were OFF! "Hey, Paddles, there are no lights down there!" No acknowledgement by anyone. About that time, FC-320, No. 3 in the approach, noticed the LAL, OLS, and DL (drop lights) illuminate. The exact sequence was questionable, but it happened after 314's waveoff. Both FC-325 and 320 were on frequency B and did not hear 314's comments about the nonready deck. However, 325 and 320 saw no break in centerline lights and assumed the deck was ready for recovery. Nothing unusual was noted in the landing area by FC-325, so the approach continued.

FC-325 continued his CCA, being dropped off at three-quarters of a mile with instructions to call the Ball. No Ball in sight. He increased his rate of descent, called CLARA twice, then acquired the Ball, and the approach continued. No acknowledgement of any calls was made by anyone. Touchdown! The rest is history.

There were still six aircraft in the landing area when FC-325 landed. All told, there were seven aircraft damaged or destroyed; 12 personnel killed or injured; and many pieces of GSE damaged beyond repair. All because of – "The accident that shouldn't have happened!"

The pilot lived to tell the story, but unfortunately, others did not. Why? How? True, it shouldn't have occurred, but it did. Looking back at the series of events that led up to the accident, one can see where it could and should have been averted at any point along the sequential line of errors. Some of those errors:

- Why did the CO and/or pilot elect to bring the aircraft aboard at night with known discrepancies?
- Why didn't FC-314 notify someone on Guard that the

deck was obviously not ready?

- Why didn't FC-325 initiate his own waveoff when no acknowledgement was received?
- Where were the air boss and LSO?
- Were the lights on or off?

2

There is one thing that is certain. There was definite confusion going on among aircrews and ship's personnel, to say the least.

Another thing was established early in the recovery sequence. There *were* "no lights down there" when FC-314 made his approach. But, exactly when and in what sequence the lights came on remained a puzzle. Sometime after 314 waved off, the lights did illuminate. It appeared that the lens operator turned on the OLS as it was common practice to do so when the waist was clear. He also thought he heard the air boss say, "Make a ready deck!" All this occurred after 314's waveoff. The lens operator thought he would be giving the LSO a chance to get set up for recovery, also. As to the actual intensity of the entire lighting systems, several maybe-they-were, maybe-they-weren't remarks were made in Pri-Fly. A quick doublecheck revealed that they were, in fact, OFF. The air boss and lens operator assumed that someone other than they turned them on. It was later determined that the air boss did not intend to activate the lights and that they were turned ON only after FC-314 had waved off, and while 325 was well into his approach. A definite error in the line of communications had occurred.

The breakdowns, assumptions, and unknown factors didn't stop here, unfortunately. They continued to mount in grandiose fashion.

- The air boss did not keep CATCC advised of the status of the deck.
- The air boss was not monitoring approach frequencies as he was still set up for launch.
- The air boss was aware that aircraft were in his area of control, but assumed other factors (LSO, OLS, CCA) would prevent anyone from landing on a foul deck.
- There was no two-way comm between Pri-Fly and the LSO platform.
- The OLS was turned on without the air boss' knowledge.

In summary, the air boss did not exercise positive control over the events that were within his realm of responsibility.

The reason for the LSO platform not being manned and ready became rather obvious. There were several aircraft still on the fantail, and LSO personnel were having trouble setting up the communications equipment. No one was in position to talk to the aircraft, let alone control them. Not being able to talk to the air boss, CATCC, or the airplane, the inevitable was about to happen.

Now the final factor. The pilot of FC-325. Why did he keep it coming? Had or would other pilots have done the same thing given the same conditions? The pilot indicated that in addition to his interior lighting and DME problems,

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he was having UHF and SPN gear difficulties. A frequency change cleared up the UHF problems, but the SPN gear was apparently giving erroneous indications. Assuming he was No. 1 in the approach sequence, FC-325 picked up his first visual clues at approximately 6 miles. In fairly rapid but uncertain sequence, the DL, OLS, runway and/or centerline lights came on. A perfectly normal night carrier picture. CATCC radioed the pilot, "Three-quarter mile, above glidepath, call the Ball." Not seeing the Ball, the pilot called two successive CLARAs. Soon the Ball appeared at the top of the mirror. He worked the Ball to the Center to touchdown, but not to a No. 3 wire, OK-trap. Instead, it was – *Into the Pack!*

When asked if the LSO acknowledged CLARA and Ball calls, the pilot of 325 replied, "Normally, yes." However, he added, he had flown many passes at night without any acknowledgement and on other occasions he had been on another frequency! Not only had *he* done this, *other* pilots had also done the same thing. When shown the CV NATOPS manual's one-quarter mandatory no-acknowledgement waveoff requirement, he stated, "That's the first time I've seen that!" A survey of the other pilots on the *Not-so-Ready* revealed that a dozen were also not aware of this requirement. When confronted with, "Would they have landed under the same situation?", 50 percent of those interviewed said they wouldn't, the rest were noncommittal. Even after the pilot entered the *Pack* and ejected, he couldn't imagine what had transpired. The unknown(s) appeared and raised its ugly head. What it was remains a mystery. Complacency? Habit patterns? Too routine? Or maybe fate was the hunter this time?

There you have it. The accident that shouldn't have happened. There were many factors that led up to this disaster, but primarily:

- The pilot did not carry out mandatory waveoff requirements of CV NATOPS and landed without LSO acknowledgement of positive control.
- Pri-Fly control personnel used improper procedures, resulting in the OLS and LAL being turned on without the LSO platform being manned and ready to control the aircraft.

The basic procedures that were violated brought about catastrophic results. Several other obvious and basic rules were not practiced or followed. Commonsense and judgment could have prevented this mishap if used in a timely manner. However, they were not, and the results have been recorded. Hopefully they will be remembered and applied the next time a similar situation arises. The solution to the equation is fundamental: *Communicate, don't assume* anything you don't have to; and *eliminate* all possible *unknowns.* The results then should be *beneficial* rather than *catastrophic.*

No Tailcone? An A-4 departed on a local training flight. After becoming airborne the tailcone fell to the runway. The pilot climbed to altitude, dumped fuel, and returned for an uneventful landing.

Troubleshooters found the speedbrake actuator had been replaced the previous night. During the tailcone removal one screw couldn't be removed. The tailpipe was disconnected and slid through the tailcone, to allow access to the speedbrake actuator.

The broken anchor nut and the partially disconnected tailcone were not reported to maintenance control. The speedbrake actuator was replaced and the powerplants work center reinstalled the tailpipe.

The mech who had started the tailcone removal was put on another job and another mech buttoned up the tailpipe. The tailpipe was CDI'd, and a low power turn was conducted. The tailcone was secured by only one of eight screws and escaped detection. This discrepancy was also missed on the daily and turnaround inspection by the pilot and final checker.

A Near Crush. An AME and AT were completing maintenance tasks in the rear cockpit of an EA-6B. The AME advised the AT that he was going to close the front canopy and got an OK from the AT.

The AME climbed down from the aircraft to close the canopy with the external handle, but realized the cockpit safety pin was still in place. He returned to the cockpit, removed the pin, and once again climbed down the boarding ladder.

As he passed the rear cockpit he saw the AT had departed. When the AME left, the AT remembered he had to connect a cannon plug on the aft bulkhead of the front cockpit. He told the AME he was going to plug it in, but the AME didn't hear him and did not acknowledge.

While the AT was leaning into the front cockpit the AME activated the external canopy control and heard a scream. He reopened the canopy which had only moved a short way, but it hit the AT on the back of his head and pinned his head against the fuselage canopy rail.

The AT was taken to sickbay, checked, and released. He had almost lost his life. The AT had failed to comply with the requirement to check the canopy safety pin in place prior to performing maintenance, and he didn't verify that the AME knew he was returning to the front cockpit.

Clear and positive communications are as necessary to safe maintenance as to safe flight operations. Constant vigilance will prevent needless accidents.

A Case of Target Misidentification. A flight of Reserve attack aircraft, two single-seaters with six MK-76 practice bombs apiece and one dual-seated observer acting as spotter, launched for ordnance delivery practice. The target was a partially submerged-aground ship in a designated restricted area located in Southeast USA. The *winter* weather was ideal, particularly from whence the reservists were homebased. Back home was under the influence of typical midwest weather: ice, snow, poopysuits and the like, but not here. Clear, sunny, and warm skies were more than anyone could ask for during this 2-week deployment.

Upon reaching the target area, an ID pass was made (or was it?) and No. 1 rolled in "Hot." Several live passes were made by both attackers on the "target ship." Although no direct

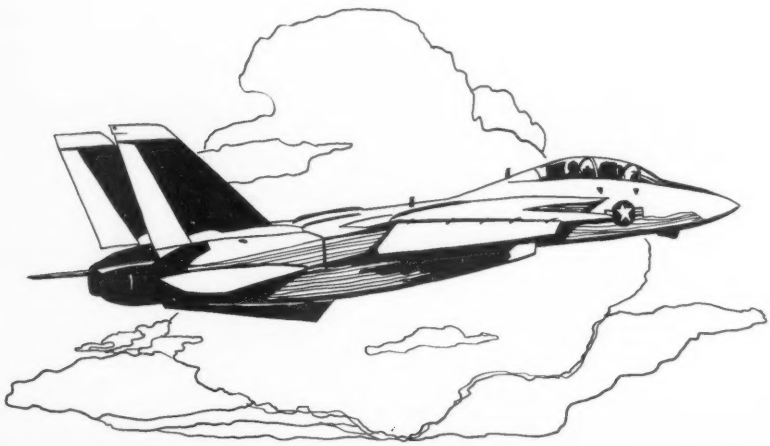
hits were recorded so far, they were zeroing-in on the grounded ship (or was it?). The dual-seated observer aircraft called the flight "high and dry" as it appeared that the "target" was moving (or was it?). After a closer look-see it was determined that in fact the "target ship" was *moving!* It was a commercial ship that was transitting the area! Fortunately for her no damage was done, but had one or more of the 24-pound *missiles* hit a sensitive area, damage or injury could have happened. The flight regrouped and went home.

True, the commercial ship had no business being in the restricted area; however, it brings back the old saying – the ultimate responsibility rests with the flight leader. Don't *assume* anything, particularly when in someone else's unfamiliar ball park. Attention to detail during the planning, briefing, and execution of the mission remain unchanged – regardless of experience.

There Is No Mission That Requires Flying a Down Aircraft. When does a *Delta Sierra* rate a *Bravo Zulu?* Very seldom, but the case below may be worthy. The crew and command involved "fessed-up" and only through candid incident reporting like this can we ever hope to overcome some of the problems that constantly plague aviation activities (Bravo Zulu).

The crew of an F-14 *Tomcat* was scheduled for the FCLP pattern in preparation for an upcoming trip to the boat. Awaiting takeoff, the crew noticed that the flaps came down rather slowly and not to the full-down position. Several attempts were made to correct the problem by recycling the flap handle. Each time this was done a disconcerting grinding noise was heard. The crew returned the *Tomcat* to the line where several more attempts were made to lower the flaps. An attempt was also made to bypass the asymmetry protection circuit by pulling the flap/slat circuit breaker. This procedure got the flaps down all right, but it was not realized at the time what damage was done or what was to occur later! Delta Sierra No. 1.

The *Tomcat* taxied back out for takeoff and into the FCLP pattern. The flight continued without further incident until the crew tried to raise the flaps when clearing the duty. The flaps only came up a few degrees. Again, using the reverse process, the crew recycled the flaps and bypassed the asymmetry protection circuit by pulling the circuit breaker. This did bring the flaps to the full-up position.



This Delta Sierra trick, coupled with the first, allowed the flaps to be driven to an overtravel condition which damaged eight flap actuators, all cone door linkages, and two sequencer valves! The F-14 was SPINTAC for repairs. This cost the squadron valuable OPREADY time, man-hours, and dollars to get the aircraft back in an UP status.

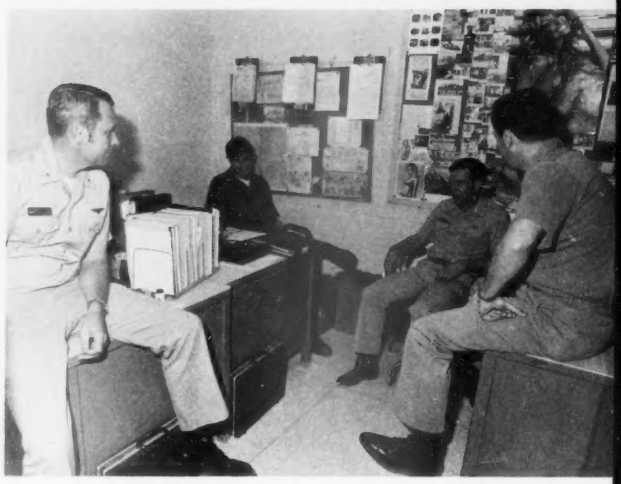
The above situation could have been a lot worse! Airloads might have caused one flap to go up while the other remained down. This would have buried the *Tomcat* and possibly the crew! Aviation has some inherent dangers, but to deliberately ignore malfunctions and to override built-in safety devices just isn't smart. The next time that YOU have an inkling to do something like this crew did – think twice, return to the line, get another aircraft, or wait for another day. There's always tomorrow. Don't try to beat the system. It's not worth it. When was the last time you tried? NEVER, we hope!

SSS (Short, Sad Story). 'Twas mid-afternoon aboard a big boat in deep water. An F-4 being respotted in the hangar bay was being towed across a fuel spill. During the ship's turn the aircraft and tow tractor began sliding. The F-4 brakes were applied, chocks were thrown under the mainmounts, but the whole kit and kaboodle continued sliding until the F-4 nose zapped and went through an open hatch. Ten grand for repairs!

This ground accident was entirely preventable. The fuel spill had been reported 3 hours previously and yet no speedi-dry was applied – until after the crunch. The spotting crew displayed a lack of awareness of the situation by moving the F-4 over a slick area while the ship was heeled over, and the brake rider didn't have time or forgot to apply emergency (air) brakes in addition to the normal system. ◄

What went *wrong?*

By CDR R. B. Mills
CO, VT-6



OUR safety banner came crashing down! After 3½ years and 115,000 flight hours, the source of squadron pride and proof of dedication and professionalism was stripped from us. The highway patrol report said it all – aircraft down, no survivors. The response in the squadron area was predictable. The pessimists said, "I told you so, accidents are inevitable, even for us." The optimists clung to the hope that the witnesses were mistaken, but they soon gave in and quietly stood on the fringes of the action and discussions. Those that were too busy to reflect rushed about in efficient response to the mishap plan procedures.

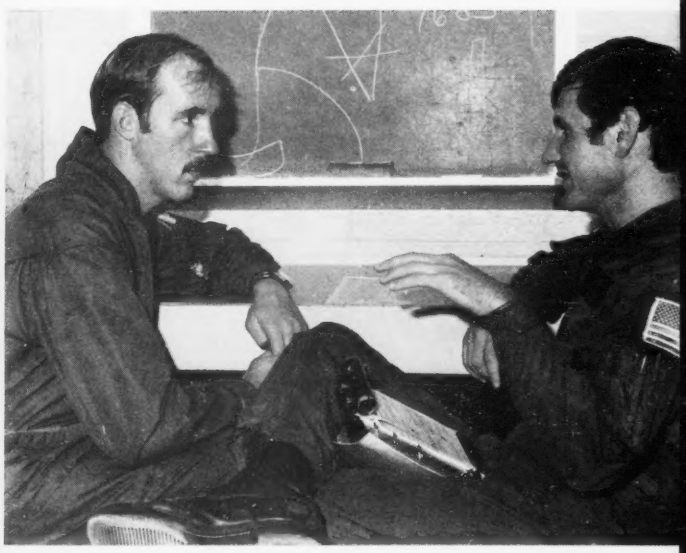
On paper we were nearly perfect, i.e., demonstrated accident free in a high-risk, high-tempo environment. All checklists showed our safety program to be strong and our attitude good. Our safety standdown, only 2 weeks past, was informative and well received. The safety officer was extremely conscientious and innovative. Safety was stressed at every opportunity, and all of the personnel had adopted the catchline, "We do it safely, 1.5 at a time." A mishap caused by maintenance error was out of the question; supervisors were skilled and on the scene.

There were, however, two areas of rapid change that the squadron had experienced lately. Perhaps they were the Achilles' heel. First: the high turnover of instructors, nearly 50 percent in the last 4 months. The second: this mishap involved a new aircraft into which approximately one-half of the squadron had transitioned. We had only 6 months of experience with it. But in rebuttal, despite the transition, our training program for aviators had remained intact. The same standardization team that had been so successful in the past trained the new pilots in the new aircraft. And while the aircraft was new to us, there was considerable experience with it in sister squadrons.

The initial deliberations of the aircraft board brought forth cause for concern and introspection. It was quickly apparent that the aircraft had not failed the pilot, nor had maintenance failed the pilot. The pilot had probably failed himself through a significant procedural oversight. The question was whether the training process, personnel, or the squadron's procedures had allowed the oversight. For awhile there were many "Did I's" and "If I had only's" silently asked and answered by those closest to the evolution. In the end, the evidence directed an exoneration of the training program and personnel involved. The board's recommendations were to add NATOPS emphasis to the procedural areas and the impact of oversights in these areas.

The recommendations were effected, but still the lingering doubts. What went wrong? What, as commanding officer, should I change? What area needs help? Was I to accept the philosophy that accidents are inevitable? I didn't think so! We had sufficient cases of heroic and near-heroic aircraft saves and responses in times of stress to discount luck and inevitability. Our accident-free record was long enough to discount luck and inevitability.

Perhaps we were whitewashing our own culpability. There must be something we were doing wrong or someone who missed on a responsibility. Countless sessions with the



training and safety personnel were still not able to discover what we did wrong, even with ruthless examination of people and policies. Even the answers supplied by squadron personnel at the safety standdown to "What will cause our next accident?" were still well wide of the mark. Our squadron Anymouse had not fingered any particular problem area. Yet how do you balance an accident with the answer "Nothing went wrong"?

Perhaps nothing did go wrong with our safety effort. As implausible as it may initially seem, herein may be the answer to my question and the benefit that we shall derive from this mishap. As we reviewed the situation, it appeared to us that a safety program might not be composed of only right or wrong, black or white actions and policies. It was more like management in general, a matter of degrees, or shades, or the best decision based on the alternatives available, or the complexities of that time. As an illustration, our discussions led to consideration of such things as the pro's and con's of solo flight, the validity of the assumption that in training nothing should be left unsaid, and just what can you assume from a satisfactory NATOPS test? None of these areas were totally defined by actions or thoughts that were right or wrong, but rather varied in degrees of appropriateness or effectiveness. Yet these same considerations had, or may have had, a major impact on our mishap.

The synthesis of our thinking established these observations. The human being is not perfect and is not limited to a finite set of actions. A safety program, even while extremely effective, cannot possibly foresee or protect for every eventuality. By this we do not infer that accidents are inevitable or that inaction and luck are a safety program, but rather that human actions may exceed the boundaries of a sound safety program. Injury or damage may or may not result, and this is not dependent upon luck. A sound and effective safety program must, then, acknowledge the variables of human nature, determine the extent of the environment to be influenced, and then plan for those eventualities ranging from the likely to the possible that are within the resources of the organization to control.

While our mishap has been saddening, it also has been enlightening. In searching for a flaw, it has given us a better understanding of our own safety program. We are better equipped now to plan and evaluate how we can best achieve the next 100,000 accident-free flight hours. ◄

Aircrews and Air Traffic Controllers share responsibility for

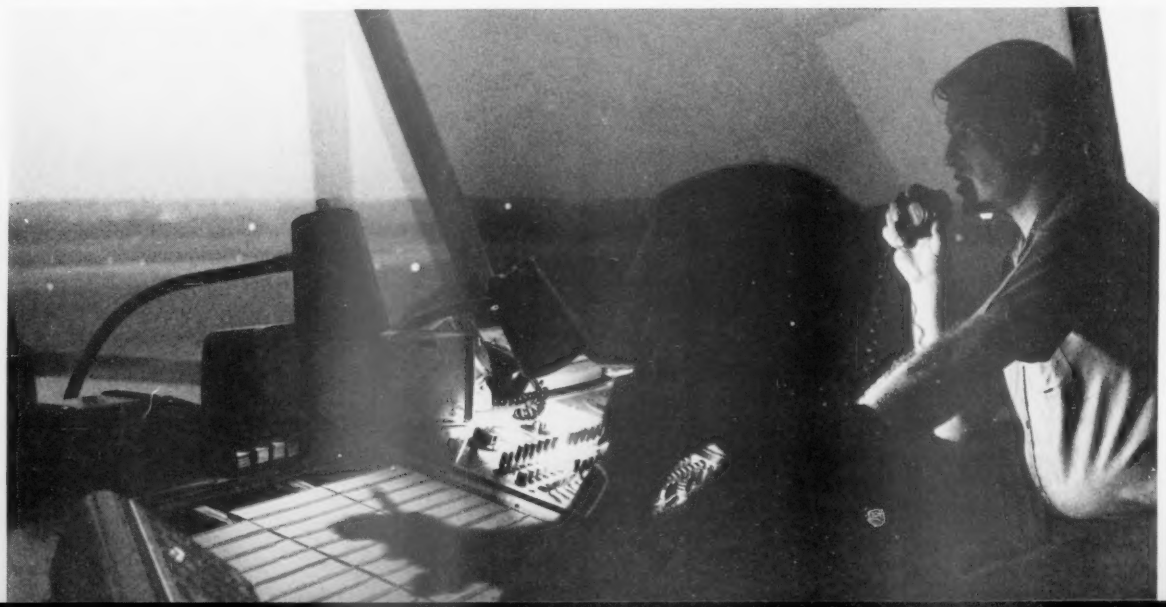
SAFE FLIGHT

MOST pilots assume that air control personnel have an accurate knowledge of the performance capabilities of the different military aircraft that may be under their control at any given time. This may be true of the experienced controllers, but there are a lot of new people under training at the various military bases that aircrews transit daily. These neophytes still don't know that a C-117 or C-118 simply will not descend as smartly as a C-130 or C-2. Also, all jets do not perform exactly the same, e.g., F-14 or AV-8 versus a C-9 or T-39. Often, controller's instructions will conflict with aircraft capabilities which make the pilot's job that much more difficult. A controller may unknowingly ask a pilot to do something which requires the talents of a Blue Angel pilot. When pilot *Par Excellance* takes the bait and performs his feat of skill and dexterity, he has just educated the controller into thinking that all pilots who fly the same type aircraft are capable of similar performance. Now along comes pilot *Neophyte* who, when given the same instructions, either refuses the clearances or bungles it. The controller's reaction is not going to be one of admiration for pilot *Neophyte* as it was for Pilot *Par Excellance* – he may naturally assume that *Neophyte* is a klutz.

The controller's primary accomplishment in expeditious traffic movement is traffic separation. Mountains and thunderstorms are obstacles which often frustrate this task, particularly the thunderstorms. Mountains are a known quantity, but thunderstorms are illusive devils which were no doubt created by somebody who hates air traffic controllers. Thus, the traffic controller who has many aircraft to control, and little airspace to aim for, is under the same psychological burden as the pilot who is squirming his way through the mass of cumulus clouds. The controller suffers an additional handicap, in that if a stalemate situation occurs wherein he has run out of useable airspace for his many aircraft, and one or more pilots refuse his instructions, he's in a real quandry. He must take backseat to the pilot's decision and attempt to unscramble the mess as best and as safe as he can. The only consolation to this controller's dilemma is that the odds of collision disaster are less than those of certain damage, injury, or destruction which lie within the omnipotent thunderstorms.

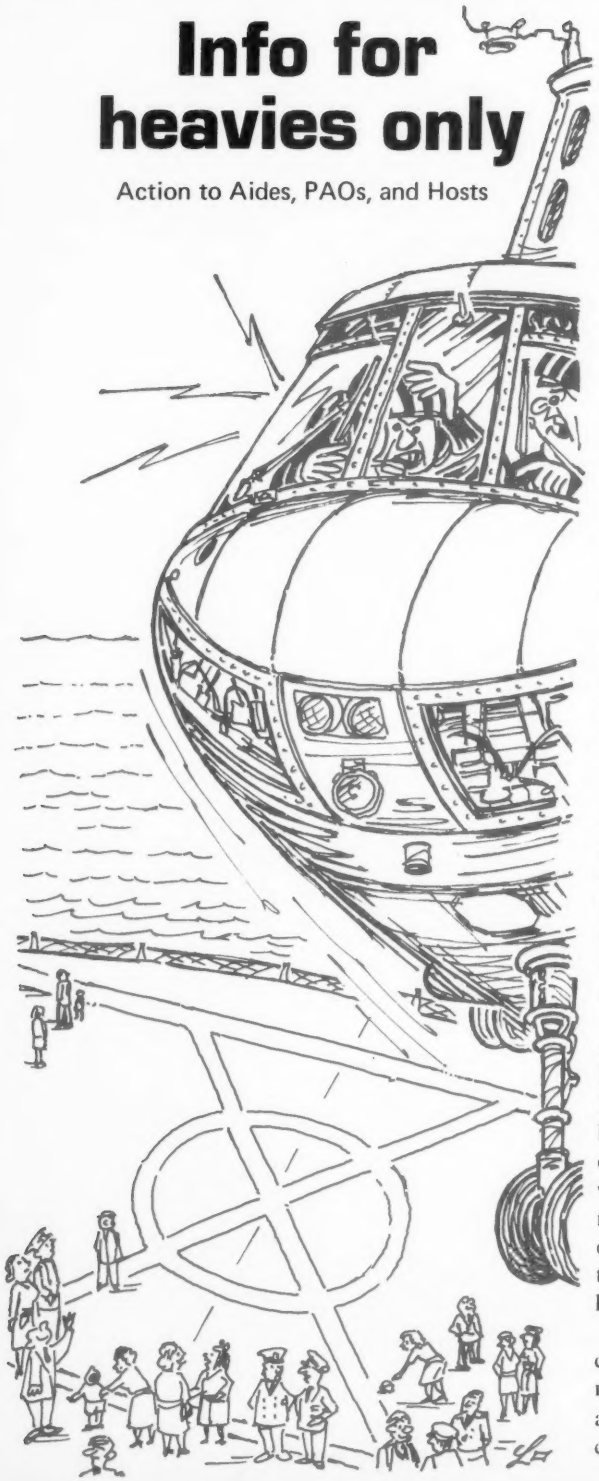
Perhaps the biggest point to be made is that traffic control and pilot personnel are both in the same boat. Each person's success is dependent upon the other's. We sometimes share each other's failures. When conflicts arise, we often take the easy path of blaming the other person. But the overriding consideration has to be that we share a common responsibility for the safe movement of enormously valuable lives and equipment. If each person is prepared to recognize the capabilities and limitations of the other, and forgive that person for the occasional trespasses which are bound to arise, the safety and efficiency of Naval aviation will continue to improve.

Adapted from UAL – THE COCKPIT
Sep '78



Info for heavies only

Action to Aides, PAOs, and Hosts



CATASTROPHES usually happen when that one-in-a-million accident takes place and investigation later discloses that few, if any, safety precautions were taken. Some catastrophes are due to human error, but they are more likely to occur due to mechanical problems, unusual conditions, or that phenomenon referred to as an act of God.

Consider, if you will, that as a VIP there are many who wish to greet you on arrival, make your visit pleasant and comfortable, and say goodbye personally. That's good. We don't propose any changes in protocol. However, we do recommend adherence to safe practices where protocol is concerned.

For example, must greetings and goodbyes on arrival and departure take place at planeside? Remember, engines are hot, ground support equipment has to be positioned, noise levels are high, ground crews have duties to perform, and emergency equipment, if needed, often is blocked by lines of parked vehicles and hordes of well-wishers. Why can't arrival and departure honors be conducted in the nearest terminal, hangar, or building? That way, parking can be away from the flight line, and crowd control is easily managed. If inclement weather prevails, chances are the proceedings will take place within a protected area. Let's make it SOP, regardless of the weather.

If ceremonies must be conducted outdoors, then let them be conducted in a roped-off or other designated area, at least 200 feet away from a plane or helicopter. There is nothing magic about 200 feet. The distance can be more depending on terrain, but if a helicopter is turning up, it shouldn't be any less. This distance would provide a safer environment and would permit erection of a temporary canopy for protection from sweltering heat or precipitation.

Recently at a new ship commissioning, an absolute no-no took place. Upon completion of the ceremonies, a helicopter landed on the flight deck with an estimated 1500-2000 people near the landing spot. The VIPs were loaded, and the helicopter pilot took off smartly. Now, one does not need much imagination to visualize the carnage which could have resulted if that 10-ton helicopter had rolled over on the flight deck, spewing death and destruction. Why wasn't that helicopter prepositioned on the flight deck? And why wasn't the operating area for the helo well away from humanity?

One submits that safety should be the foremost consideration by planners of ceremonies – not ignored or relegated to brief contemplation. Proper safety precautions are not complicated, and they should be No. 1 on the list of considerations. ◄

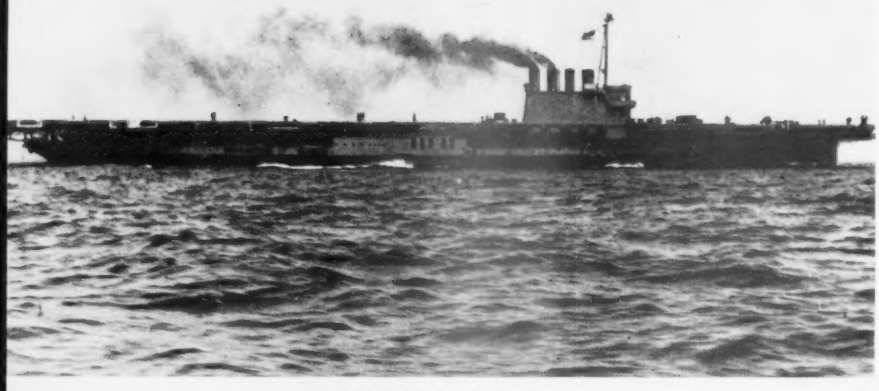
Do you remember?

USS SABLE (IX-81)
USS WOLVERINE (IX-64)

SIDEWHEEL TRAINING CARRIERS CIRCA 1943-1945 HOME PORTED AT CHICAGO

By R. A. "Chick" Eldridge
Naval Safety Center

USS SABLE (IX-81)



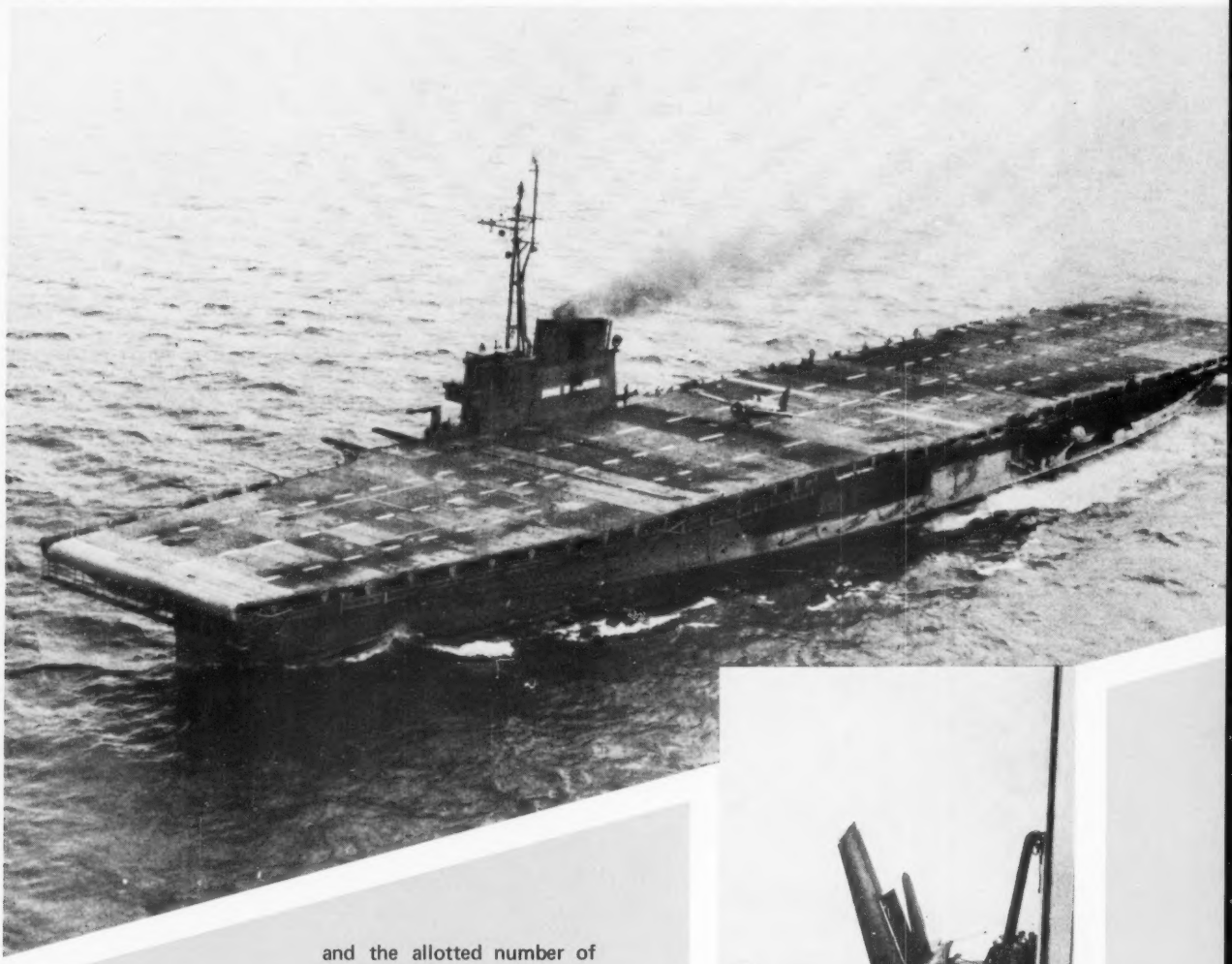
USS WOLVERINE (IX-64)

"YES, I remember those two sidewheelers. I was up at NAS Glenview in 1944 to get checked out in carrier landings. The Navy felt that conducting carrier qualifications on Lake Michigan would accomplish the same result without the hazard of the enemy submarine threat that would exist off either coast of the United States, particularly the Atlantic.

"These two sidewheeling ex-lake steamers gave thousands of naval aviators who received their wings in '43, '44, and '45 their first exposure to carrier aviation. Comparing SABLE and WOLVERINE to our supercarriers of today would be like comparing a 1915 automobile to a 1978 Lincoln Continental, but they got the job done.

"Wind over the deck was always a factor. Flank speed for the two paddle wheelers was 21 knots. When the wind over the deck wasn't sufficient to work service type aircraft such as F6Fs, TBMs, F4Us, SB2Cs, etc.,

USS SABLE (1X-81) was built in 1924 and acquired by the Navy in 1942. Her conversion was completed in 1943; she was scrapped in 1948.



the pilots were shoved into SNJs to make their initial carquals.

"Neither SABLE nor WOLVERINE had a catapult, so all takeoffs were, of necessity, free-deck launches. Nor did they have a hangar deck for parking, repairing, or maintaining aircraft. Two or three spots on the side of the flight deck were available for spotting 'dud' aircraft. If it was a particularly bad day and the allotted number of deck crashes was exceeded, the captain had no choice but to fold up operations and return to Chicago for lack of deck space.

"Of all the thousands of carrier aviators in naval aviation history, I look back with the fond memory of having been one of the select fraternity who can say that he was introduced to the intricacies of carrier landings as a fresh water sailor in a paddle wheel carrier on Lake Michigan. Liberty in Chicago wasn't too bad either." ■

After missing the wire, an unlucky F-6F hangs from the catwalk, collecting spray. In the background is a Coast Guard plane guard.

Anymouse

Does Anybody Know I'm Here?

I WORK in an air traffic control tower in the Training Command. Our objective is to train student naval aviators and send them to the Fleet with the basic skills so they can refine those skills and become fine aviators.

One thing I have noticed over the past few months is a complacent attitude among some of the IPs (Instructor Pilots) while in the back seat of the aircraft at and around the airport.

There were three incidents in a 3-hour period last week that confirmed my belief that a lax attitude does exist.

The first incident involved a jet coming off radar to our runway. At this time it is a closed runway due to repairs. The aircraft did not bother to check with the tower before he commenced a left downwind. The first the tower heard from the aircraft was when he called the 180 with his gear for a full stop.

The second incident again involved a jet pilot who requested a PPA (Practice Precautionary Approach). The aircraft was told to check 8 and 4 miles straight in to 13L. The aircraft acknowledged this transmission. That was the last the tower heard from the aircraft until after he shot his PPA and requested a downwind into the touch-and-go pattern. The tower attempted to contact the aircraft when it was approximately 1 mile on final, but to no avail. The IP in this instance was also the squadron CO.

Fortunately in these two incidents there was no conflicting traffic that could have been a serious hazard.

The third incident involved another jet with a utility hydraulic failure. The aircraft requested a straight-in to the off-duty runway for a shortfield arrestment. The IP never did declare an emergency. The tower had to initiate emergency procedures. Finally the crash captain called a ready deck and the aircraft made a successful shortfield arrestment. It was not until 5 minutes later when the squadron ordnance crew asked the tower if that was one of the aircraft that had gone out on a bombing run. The ordnance crew then informed the tower that the aircraft probably still had some Mk-76 practice bombs onboard. Sure enough when the aircraft was towed back to its hangar it still had three Mk-76 bombs on the bomb racks. Neither the IP nor the SNA bothered to pass that piece of information along to the tower. To top it all off, the IP on that flight is also that squadron's safety officer.

I am not trying to put down the people that fly. I am only trying to bring out a point that may have been overlooked lately. Complacency can destroy just as fast as anything else.

Air controllers are here to help, but we must work together with the pilots as a team, so we can provide the kind

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The purpose of Anymouse (anonymous) Reports is to help prevent or overcome dangerous situations. They are submitted by Naval and Marine Corps aviation personnel who have had hazardous or unsafe aviation experiences. These reports need not be signed. Self-mailing forms for writing Anymouse Reports are available in readyrooms and line shacks. All reports are considered for appropriate action.

REPORT AN INCIDENT
PREVENT AN ACCIDENT

of service that you want, need, and deserve. But you must let us work. Give us the reports we request. Let's cut out the complacency. Our job is stated "the safe and expeditious flow of air traffic around the airport traffic area." Please help us achieve that.

Controllermouse

Hot Stuff

OUR helo squadron recently had an incident which could have resulted in an accident of unknown magnitude. One of our pilots, upon completion of preflighting his aircraft for a ground turn, hopped in to turn it up. Starting with the No. 1 engine, he signalled to the plane captain that he was ready.

After the fourth or fifth consecutive try at starting the engine, I noticed that the compartment where the starter generator was housed was beginning to smoke – out of the vent nearby. We grimaced as we knew he had "smoked" the generator.

The pilot must have assumed that the generator was good for a few more turns, so upon momentarily turning the power off, he called the plane captain over and requested the plane captain bring some primer over to prime the jet engine. At first we thought he was joking, but upon his insistence that we get a primer to assist the starting of his aircraft, we knew he was serious.

Now in all my days of NATOPS reading, nowhere is it stated that a jet engine will be primed with a volatile liquid or gas other than JP-4 or JP-5 to help start the engine.

Evidently this pilot assumed that a primer that was used on an NC-10 electrical power unit would be just as accommodating on a T-400 jet engine. We requested that he reread his NATOPS before turning up his aircraft again.

Had the plane captain been as uninformed as the pilot, there is no telling what might have happened!

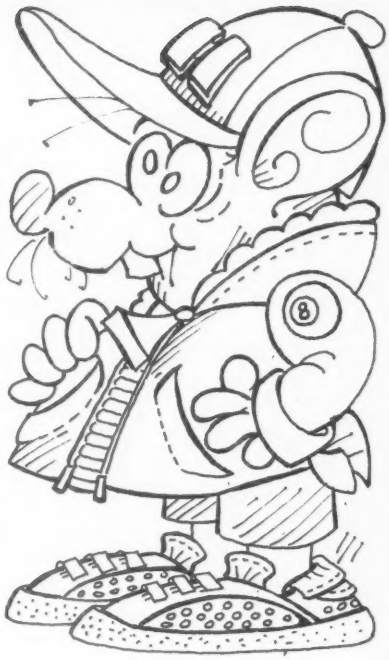
Burnedupmouse

How Long Can You Tread Water?

DURING night FCLP, the skipper of our outfit manned his aircraft without his survival vest on. It's a good thing our aircraft don't fly around or over water. (We just happen to be where you can't fly more than 5-10 miles in any direction without crossing water.) This could have been disastrous in the event of an ejection.

When he returned from the flight and was questioned about his SV-2, he said, "If I thought I needed the SV-2 survival vest, I wouldn't be in this business."

Hamstrungmouse



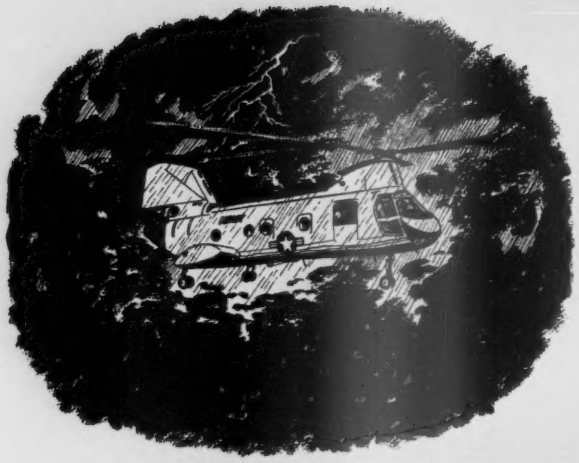
Do As I Say

THERE'S a certain officer in our squadron who appears on the flight line in his tennis shoes. This sets a very poor example for our plane captains and linemen, but he's oblivious of it. As a matter of fact, he's also oblivious of other commonsense acts. For example, the other day he cranked up his fast mover while a maintenance troop was standing on the UHT working on the vertical stabilizer. He even moved the UHT while the guy was standing on it.

I was concerned about his safety, but I think he couldn't have cared less about his safety, mine, or anyone else's. Whatever happened to caution, following procedures, safety precautions, etc.?

Our squadron has over 20,000 accident-free hours, and I see more and more examples of complacency all the time. Higher-ups should set the example. My decision to go or stay gets easier to decide with this going on. Only 65 more days to go!

Shorttimemouse



Fill'er up and let's go!

WE HAD spent the whole day giving helo rides to students while on a recruiting junket to ROTC Deep South University. After kicking out the last stud late that afternoon, we then zipped over to Boondock AFB to refuel our H-46 for the final leg to NAS Homeplate. Five minutes after landing, the local weather guesser declared a lightning alert due to advancing CBs and closed down all refueling. We moped around his office for about an hour with one hangdog story after another about how badly the squadron needed us back on time. And when we discovered that Boondock was forecast to go hard IFR in less than an hour, we really laid on some tearjerkers. Besides, the HAC had an important stamp club meeting that same evening back at Homeplate.

Finally, during a break in the storm line, the forecaster relented, clearing us to refuel and launch VFR on a straight shot home. The wx brief read Homeplate clear and five, Boondock 1600 broken and deteriorating with scattered CBs in between, and freezing level about 8 grand. Shucks, no problem, I thought to myself while tucking away the DD-175. We'll bust out of Boondock, dodge around the buildups, and sail into Homeplate with sky to spare.

Fifteen minutes later, we were airborne and boring east. At first, we congratulated ourselves on escaping, however, several ominous things happened in quick succession. First of all, it went from dusk to dark, as usually happens that time of day. Then both our TACAN and radar altimeter, which had been working fitfully all day, decided to call it quits for good. And when we tuned in our backup nav gear, the ADF turned out to be as unreliable as the pointer on a Ouija board. Next, the RMI began gently precessing, and we discovered our standby compass was unreadable except by flashlight because of a burned out bulb.

Up ahead, the horizon was laced with lightning flashes and the ground below us was little more than a thousand square miles of timberland and swamp. What to do? Couldn't go back, couldn't go down, couldn't go up, and sure didn't want to go forward.

While we were mulling over this situation, we went IFR in a violent rainstorm for the first of many times. The VSI danced around between $\pm$ 1000 feet per minute. We immediately climbed to the area MOCA, slowed down to maintain control in the turbulence, and began calling the local FSS for a weather update. (Too late!) No answer.

While dodging the heavy concentrations of lightning/rain, we even backtracked a few times toward Boondock to keep from flying into mature CBs. A solid line of electrical storms seemed to lie across the route home. Twenty minutes and several zigzags later, our DR plot towards Homeplate became worthless.

Couldn't raise Center, Approach, or any FSS on Guard or any other frequency for a UHF/DF steer. Finally, an aircraft working the vicinity of Homeplate heard our Guard call and relayed to Homeplate Approach. After several fretful minutes of identing and recognition turns, Approach picked us up on the edge of their scope – 70 miles from Homeplate, 30 miles away from estimated position, and heading 20 degrees off our reported course. A few vectors, another 15 minutes of flying through lightning flashes, and we broke into the clear. As advertised, Homeplate was clear and five, and we landed uneventfully after 2+20 on what is normally a 1+45 hop.

It was not until after relaxing with a beer that we fully comprehended just how deadly a recipe for catastrophe we had brewed up that night. The ingredients were an ASO's nightmare – get-home-itis, fatigue, VFR flight plan in probable IFR weather, penetration of thunderstorms in a helo, aircraft with unreliable nav gear, etc. Another strike or two against us and the hop might easily have ended in checkmate instead of a save by Approach Control.

BRAVO ZULU

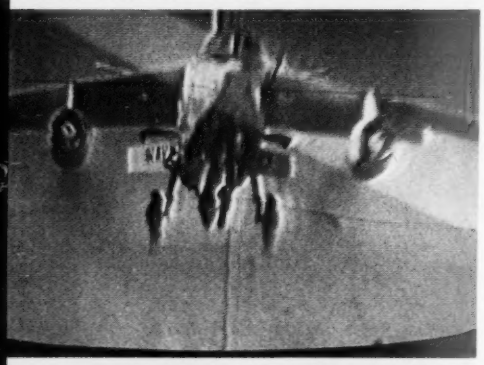
Maj T. J. Singleton, USMC
1stLt R. S. Whitman, USMC

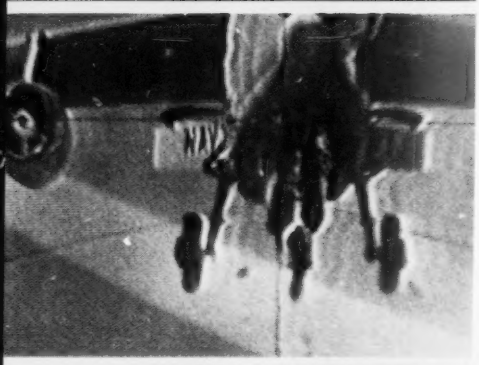
ON 14 March 1978, Maj T. J. Singleton and 1stLt R. S. Whitman launched from MCAS El Toro in their F-4N (EC-43) to conduct a night fighter intercept mission in the local offshore training area. Twenty minutes into the flight, Maj Singleton executed a nose-low heading reversal at the termination of an intercept. Upon completion of the turn and while flying straight and level, the crew heard a loud bang, followed by a slight airframe buffet and a noticeable increase in the noise level inside the cockpit. Maj Singleton's attention was directed inside the cockpit where he found all his pitot static instruments to be wildly fluctuating and erroneous. Lt Whitman secured the aircraft radar and requested the wingman (EC-41) to join for a visual inspection. The wingman's inspection revealed that the radome had departed the aircraft.

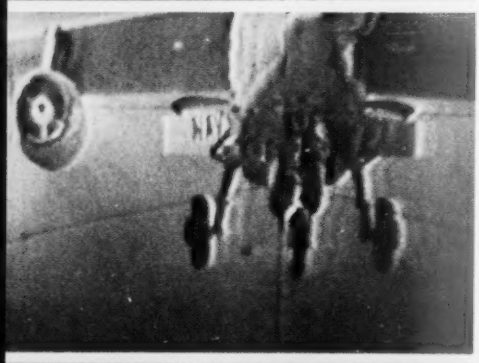
An emergency was declared, and the flight headed toward MCAS El Toro with Maj Singleton electing to fly wing on the lead aircraft for altitude and airspeed reference. En route, he noticed hydraulic fluid on the canopy. Anticipating a utility hydraulic failure, he configured the aircraft for landing. Seventeen miles from homeplate, Maj Singleton noticed the EGT on the starboard engine climbing rapidly. As he retarded the throttle, a large fireball erupted from the starboard intake. Believing the engine to be FODed, Maj Singleton quickly secured the starboard engine. Upon completion of the engine shutdown, the flames subsided and Maj Singleton reconfigured the aircraft for a single-engine landing. The flight terminated with a successful M-21 shortfield arrested landing.

Maj Singleton's and Lt Whitman's superb airmanship and professional handling of multiple emergencies under trying circumstances prevented a major mishap and saved a valuable aircraft. Well done!

1stLt R. S. Whitman (left), Maj T. J. Singleton (right)







Aircrews who follow NATOPS and SOP may not be able to prevent an accident, but they are stacking the odds in their favor for

AN EASY PICKUP

AN EA-3B crew was assigned a 3½-hour recce mission during a Med cruise. Upon completion of the allotted time they returned to the carrier observing zip lip conditions. Approaching the 180 and dirty they saw an A-7 bolter. However, the A-3 pilot continued the approach but was waved off in the middle to accommodate the A-7 and to facilitate the deck spot.

The A-3's second approach was graded "fair pass, high start to in the middle, nosedown from in the middle to at the ramp, slight left to right lineup correction at the ramp." The *Whale* caught No. 1 wire and the arrestment was normal for about 190 feet. Then the purchase cable on the starboard side separated. The cross-deck pendant which was still attached to the port purchase cable continued to play out through the aircraft tailhook.

The pilot of the EA-3B checked his power at 100 percent and realized he was between a rock and a hard place. He couldn't stop on deck and he knew he couldn't regain flying speed. The aircraft continued down the deck, off the angle, and settled into the water slightly nose high, at about

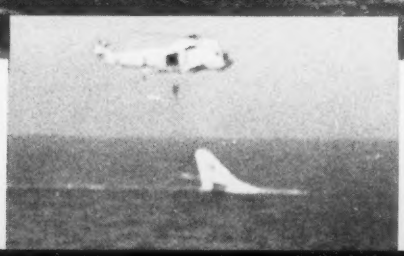
105 knots.

It only took the crew of seven just over a minute to exit the aircraft. No one was injured. The aircraft floated for 7 minutes before sinking. The loss of the aircraft was attributed to the fact that after completion of more than one-half of the arrestment cycle, too much energy had been dissipated to allow the aircraft to fly and too little deck remained to stop.

The SAR helicopter was following the A-3 aboard (last aircraft in the recovery) and realized he was about to be very busy, even before the announcement that an aircraft was in the water. The HAC alerted his crew to rig for rescue. He flew into a hover off the tail of the A-3 and lowered a swimmer within a minute of the A-3 ditching.

The swimmer was lowered by the hoist operator because of floating debris in the area. He grouped the survivors together and got them clear of the wreckage. The first three survivors were hoisted using the horse collar. However, it was taking too long for each one to get into the collar, so the remaining four survivors and the swimmer were hoisted in the Billy Pugh rescue net.* All survivors were picked up and back on the carrier deck in less than 20 minutes. One survivor said, "The helicopter SAR crew did a fantastic job."

*(*Rescue and Survival Equipment Manual now permits its use when no other rescue device is available.)*



Thoughts on two thousand hours in type

By LCDR R. R. Powell
VF-43

FIRST flight was in A-4B 142869 at Lemoore on 27 January 1966 (guess the San Joaquin's fog lifted long enough for a brand new JG to fly a fam-1). There was a lot of preparation and anticipation for that flight. A whole new phase of my career was beginning, and I studied the *Skyhawk* like it would be the only airplane I might ever fly. Well, it wasn't, but I certainly spent enough time in her "comfortable" cockpit. Time enough so that when the TA-4 arrived it felt roomy, and since then, all other types of aircraft seem positively spacious. One of the best *Skyhawk* pilots I ever knew was a great monster of a man. He claimed the secret was because of his size. All he could move were his fingers and therefore had to be smooth.

The 2000th hour required a lot less preparation and had no anticipation other than the flight schedule. I knew it was getting close to the round number, and a check of my logbook showed 2004.6 hours. The flight itself? A NATOPS check. How appropriate you might say; or how contrived. Standard safety theme: "The ole pro checking out the new kid." Right? Wrong! It was *my* NATOPS check, and the "kid" was about to go over 1000 hours himself.

Actually, it was rather appropriate. One of the real strengths of the Navy's aviation program is the assumption that no one is ever so senior or experienced that the need for periodic updates and checks stops. Granted, after a few of them, annual NATOPS checks are not as difficult, but the challenge is always there. The challenge to be able to perform emergency procedures, to be able to do them well and without hesitation, to be able to demonstrate a sound knowledge of aircraft systems and functions, and to be able to learn something new about your machine. There's always something new. After the two grand flight, a nugget fresh from the Training Command gave me a new item on preflight. Now, I'm not a preflight freak who takes the airplane half apart before climbing in, but a good look at the essentials can be done without wasting time if you concentrate and know what to look for during preflight. Like all habit patterns, if a preflight is interrupted, something is going to be overlooked which occasionally leads to problems.

Obviously a lot has changed over the years. Some say for the worse. I'm not so sure. My first carrier quals at night were a visual pattern to an unlighted deck. Thanks, but I prefer a set of centered ACLS needles to a centered ball. Yup, the APC (excuse me, the PCA) is down to 18,000 and may drop to 12,500. Positive control is "in," an inoperative IFF a downing gripe, but I seem to spend as much time flat on my back and at high "G" as ever. Only now, someone knows where I am at all times. Too much control? No more than in the Tonkin Gulf in the "good ole days."

On the way to 2000 hours a favorite statistic of the

Safety Center kept coming to mind: the famous graph that plots hours of experience against likelihood of an accident. The experts at the Safety Center say the "stats" are valid. (*See OCT '78 issue – "Is Experience the Key?" – Ed*). However, it didn't work out for my personal cycle. Does this mean I'm scoffing at the concept of mishap rate being linked to flight hours? No, it does not. I always disliked the idea of becoming a statistic. So, as the "critical points" arrived (ever notice how they are at "round" numbers like 100, 500, 1000, 1500?), I reacted in a way to avoid having my "statistically likely mishap." At the same time I was getting my patch, certificate, tie-tack, or what-have-you, I was spending as much time studying NATOPS or in the simulator as the newest pilot in the squadron. It must have paid off because I haven't had an accident yet. Oh, I've had my share of what are euphemistically called mishaps, but the airplane and I have always made it back. Not all of them were simple malfunctions either; the emergencies listed step by step in the PCL. A healthy share were the nightmares whispered about in NAMO or ground school; the *compound* malfunctions, the type where knowledge of every system and their interrelationship really pays off. For example, trim stuck at 450 knots *and* utility hydraulic system failure, generator failure, *and* NORDO at night on a cross-country, wing fuel transfer inoperative, *and* inoperative fuel gage. All of them are sea stories now, but at the time . . . It was not always so easy to keep it all straight either. On one tour I jumped regularly from A-4B to C to E to F to TA-4. From J65-W16, J65-W20, J52P-6, J52P-8 engines; four types of ejection seats. And, just for good measure, R-3350 in the old SPAD.

Has it been fun? You bet it has, for me particularly. And what with VT, VC, VMA, reserves, and the instrument/adversary squadrons still flying that small, great airplane, it hopefully isn't over yet. Allow me to take advantage of my "more-time-at-the-top-of-a-loop-than-you've-got-in-the-air" and list my formula for reaching the milestone marks no matter what aircraft type you're flying.

- Learn your machine at the start.
- As time goes on, never assume you know as much as you think you know.
- Listen to others who operate the same machinery no matter how senior or junior they are.
- Aviation is a large field. Do not disregard incidents involving other types. The sky and usually the circumstances are the same for all aircraft.
- Prepare for the "statistically bad" times.
- Stay alert for your own "slumps."
- Enjoy yourself. There is not a bad mission in naval aviation.
- NATOPS and safety are a proven team. Stick with them. ◄

HE LET IT GET AWAY

AN IP (instructor pilot) and another instructor were out flying a combination instruction flight, NATOPS check, and demonstration in a *Huey*. The flight had been a particularly thorough one, and the H-1 flew beautifully. The flight had included full autorotations, fixed-pitch tail rotor failures, and simulated loss of tail rotor thrust in a hover.

Approximately 12 full autorotations had been shot by both pilots before the IP demonstrated maneuvering autorotations. The IP set up downwind at 1000 feet and intentionally put the helo in tight, in relation to the touchdown area, so that maneuvering principles could be demonstrated.

It was obvious that a steep glide slope would be necessary to dissipate excess altitude to get down. A left S-turn, using 10 degrees of bank was begun, followed by a turn reversal, and the helicopter was rolled out on final with an adequate glide slope to touchdown. The landing was made on the desired heading with about 10 feet of groundslide. The tower observer thought touchdown was hard and inquired if everything was all right.

Both pilots felt comfortable and reported they were OK. The IP, however, wasn't satisfied and decided to repeat the maneuver. The second attempt was begun from the same 180-degree position but with 70 KIAS vice the 65 KIAS he had used on the first demonstration. A steeper turn to the 90 was performed. At the 90 they were at 500 feet, airspeed slowing to 55 KIAS, and rotor RPM at 320.

The pilot being checked asked if the IP was going to make a larger S-turn, because of a tight turn. The IP said he was. The helicopter was 50 degrees left of the final course and the IP rolled right about 90 degrees. Passing 200 feet, airspeed 55 KIAS and rotor RPM steady, the IP saw the windsock showing the wind direction 40 degrees left of his planned final course.

By the time the IP thought about the windsock they were at 100 feet, 45 KIAS, and turns still steady. The IP continued a left turn to get back into the windline. However, both pilots realized they were drifting right, so the IP used collective to stop the drift. Now, the airspeed and rotor RPM began to decay, the drift continued, their rate of descent increased, and they were a crash waiting to happen.

At about 10 feet, and when the RPM had slowed to 220, the IP tried to level the skids. However, the helo hit the ground on the toe of the left skid. The nose fell through, breaking the lower left chin bubble. The helicopter bounced aft, and after several unusual maneuvers rolled onto its right side. The main rotor blades broke off on the runway. When all motion ceased the IP secured the proper switches and both pilots exited uninjured.

The IP's decision to make a large turn to get back to the windline at 100 feet was an error in judgment. He would have been a lot better off to add power and wave off. The wind was not that strong – 10 knots or less. His desire to perform a smooth touchdown into the wind caused him to not recognize the box into which he put himself.

Some felt the IP's final turn was due to overconfidence in his ability to make maneuvering autorotations; others felt that the IP's preoccupation with the need to land on a spot took precedence until the maneuver had deteriorated beyond recoverable limits.

There were no adverse maintenance or servicing factors involved, nor were there any supervisory errors. The IP was healthy, proficient, qualified, and designated as one of the squadron pilots to perform maneuvering autorotations. NATOPS procedures were being observed except for those noted in the final turn, resulting in insufficient rotor RPM to cushion the landing.

The obvious point for all pilots to remember is the hazard of channelized attention to one phase of flight. The importance of continued close attention of all flight parameters is paramount. *Safety of flight is far more important than completing any practice maneuver.* ◄

"Any object dropped in a cockpit will always seek the darkest, most inaccessible point in that cockpit."

21

The law of irretrievability

By LT J. C. Watson
VF-114 Safety Officer

IT'S a dark and stormy night. You are copying the most complicated missed approach you have ever heard, when right at the climax of the controller's saga, your pencil mysteriously leaps from your fingers and disappears into the black void of the cockpit.

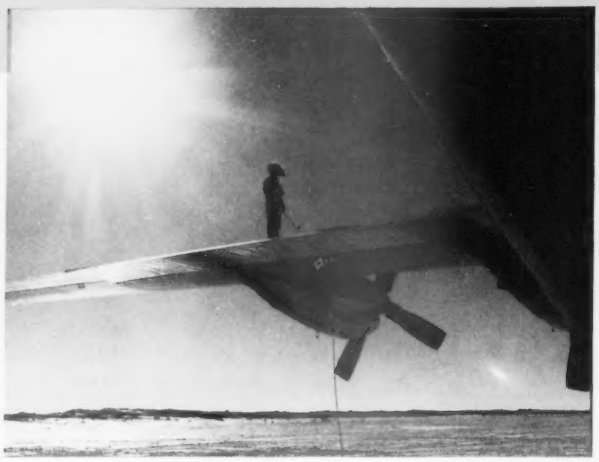
Sound familiar? I think we've probably all been there at one time or another. We usually just press on, and after landing, down the aircraft for FOD in the cockpit. The burden then falls on the plane captain or AME to locate the wayward instrument.

Here's a suggestion on how you can cut down on the FOD hazard of lost pencils in the cockpit and the lost man-hours required in hunting them down. First, our squadron policy dictates that no more than two pens or pencils be carried by an aircrewman. Therefore, there would be no doubt after dismounting from an aircraft about whether something has been left behind. Second, all pens and pencils carried are wrapped with two bands of the reflective tape used in tool FOD control. This greatly eases the search operation once an instrument is lost.

Not only pens and pencils are subject to this program. Penlights, flashlights, and other small items frequently used can be made more visible by the addition of the reflective tape. Above all, it's a highly visible indicator to the troops that we aircrews are as actively concerned and participating in the FOD control program as they are. ◄

Back-in-the-Saddle –

A SUGGESTED PROGRAM



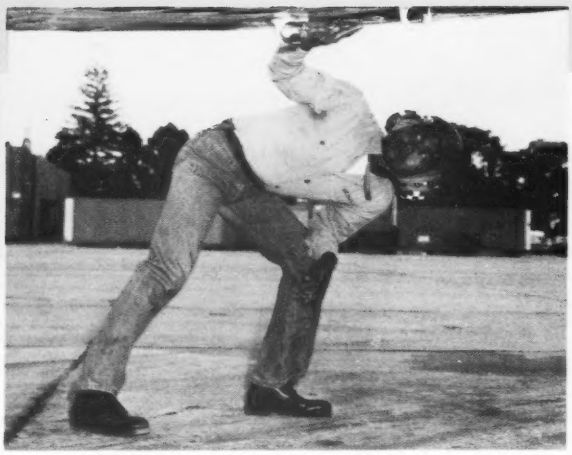
SAFETY in Naval aviation is akin to diets. It should not rest upon a series of special or crash programs. Rather, it should depend upon the day-to-day application of the professional approach. A back-in-the-saddle program, then, is suggested only as an emphasis on professionalism. Emphasizing the professional approach will not only serve to minimize any adverse effects of the problems already mentioned, but should have beneficial effects on future operations.

An effective program must have command support from the unit level all the way up to CNO/CMC in order that it will result in coordinated action and benefit all. The ASO and NATOPS officer, under the CO's direction, can do much to effect this coordination. They should also assist in the planning, preparation, and presentation of ground/flight training lectures.

Aircrew training. Depending upon the proficiency of assigned personnel and the type flying involved, consideration should be given to scheduling aircrews for a series of lectures prior to return to flight. Suggested topics are:

- Use of safety and survival equipment and related procedures.
- Aircraft preflight, ground handling, hand/light signals, and normal flight procedures. Aircraft and weapon system refamiliarization.
- Aircraft flight characteristics and operating limitations.
- Local course rules, flying areas, IFR/VFR and SAR procedures.
- Emergency procedures. These should receive detailed consideration. In addition to lectures, demonstrations, and quizzes, maximum use should also be made of OFTs and WSTs to simulate emergency and normal inflight procedures.

In order to maintain maximum benefit from the lectures and quizzes (written and oral), it is suggested that they be conducted in an informal manner similar to the AOM/ACM. Discussion should be encouraged, but guided by the speaker in order that all salient points be covered. A point to remember. Don't try to do this in one long, drawn-out sitting! You'll lose the crowd without gaining the intent. Several 30-minute periods will be much more beneficial in the long run than one 4-hour gaggle in the readyroom.



When administering quizzes/tests, regard them as additional instructional techniques rather than rating devices. However, be alert for the consistently low scorers – they may be the "weak-linkers" in the safety chain of success. How many times has history repeated itself with the fact, "He was just an accident waiting to happen," or "He's a weak stick, but . . ." NATOPS manuals, maintenance manuals, instrument manuals, CV and General NATOPS manuals are ready sources for your program. Don't limit it to these, but include local course rules, lessons learned, personal experiences, judgment, and common sense.

Support personnel. Consideration should be given to temporarily assigning senior CPO/SNCOs in substantial numbers (if available) to the flight line and maintenance area to supervise aircraft servicing, preflight, starting, loading, and general safety until operations have been resumed on a routine basis.

Maintenance personnel, particularly on the line, may also benefit from a series of informal or formal lectures. Suggested topics are:

- Operation of ground handling equipment.
- Preflight/postflight, ground handling procedures.
- Hand/Light signals.
- Aircraft servicing to include:
  (1) Fuel, oil, lube (POL)
  (2) Pneumatics/hydraulics
  (3) LOX
  (4) Ordnance
  (5) General safety

Scheduling. Scheduling considerations should include, as a minimum, these points:

- Have aircrews scheduled had sufficient rest? This may be difficult to determine, but an attempt should be made to do so. Aircrews should be encouraged to reveal any excess fatigue, lack of sleep, or other factors which would dictate removal from the flight schedule. Flight surgeons should be on the lookout for postholiday "blues" among aircrewmembers. Above all, the pilot or any person

involved in flight operations must be honest and do justice by removing themselves from the schedule when conditions warrant. Personal responsibility lies with the individual, for only you really know "what's happening." Also, if initial flight ops have been planned on a reduced scale, elimination or substitution of "not-quite-ready" pilots or crewmembers can be effected with a minimum of confusion.

• What is the pilot/aircrew's level of proficiency? This definitely should be considered. In the training command there are well-established procedures for warmup flights after an extended layoff. Hopefully, operational units have established similar programs. If not, now is the time to do something about one. Nevertheless, if a pilot performed his solo checkout prior to going on holiday leave and consequently hasn't flown in nearly a month, a dual hop or two is not asking too much. (A very inexpensive insurance policy, considering the alternatives.) OFT or WST is a certainty whenever available. Likewise, any aircrewmember who has had any new training cycle/syllabus interrupted should receive consideration for warmup or refresher training. In other words, the scheduled flight should closely conform to pilot/aircrew proficiency. Consideration when scheduling should be given to putting a current/proficient pilot along with the not-so-current/proficient one(s). Too often the flight schedule is marked with the "blind leading the blind" after extensive layoffs. Care and caution can reduce the chances of mishaps occurring.

• What are the weather conditions and forecasts? There are times when flight ops may have to proceed at full speed, even in bad weather. If the pilot proficiency has been degraded by an extended layoff, throw in a little bad weather, well, maybe that's all that's needed to tip the scales against the pilot. Does this hop really have to go today? Think about it. Mission accomplishment versus safety. Which is paramount?

The individual pilot or aircrew. The individual pilot or aircrew is in the best position to ensure the professional approach to postholiday flying. Each should assure himself that he is current in all procedures, in good physical and mental condition, has a sound and airworthy aircraft, and has a complete brief covering the entire flight prior to takeoff.

Summary. A coordinated effort by all hands to bridge the transition from holiday relaxation to a full flight schedule, whether billed as a *back-in-the-saddle program* or as an emphasis on the *professional approach*, will pay safety dividends not only during this period, but in months and years to come. Fly safe in '79!

The bus that couldn't fail

By LCDR Frank Ferry
VP-56 ASO

THE flight was the first as a PPC for the pilot of the P-3C *Orion*, soon to depart on a routine training hop from Mildenhall AB England to NS Keflavik, Iceland. He was confident in his crew and aircraft. Should an emergency arise, the crew concept (and NATOPS) could handle it.

After a detailed brief, the flight departed and climbed to their assigned altitude of FL260. All systems were "Go." En route weather was forecast to be good, but the arrival weather at Keflavik was to be low clouds and poor visibility. This crew, like all others stationed in the Arctic climes at one time or another, had flown in extreme conditions that the North Atlantic offers in the late winter and early spring. They knew what could be expected. However, an added ingredient would be thrown into the forthcoming problems of this novice PPC – the flight would be arriving after dark. Not normally considered a factor, but due to the long days associated with Arctic flying, the crew had acquired little or no night time during this deployment. The above factors coupled with the soon-to-happen mechanical problems would test the PPC and crew's knowledge of the *Orion's* systems and their own aeronautical capabilities and ingenuities.

The flight was at the halfway point when the No. 2 generator light illuminated, followed by indications of loss of the *MON-AC* (monitorable essential a.c. bus). Generator reset procedures were unsuccessful. The generator was then secured. Even though the *MON-AC* Bus was lost, the *MAIN AC Bus "A"* transferred to the No. 4 generator. While the crew tried to determine what caused the *MON-AC* Bus to fail and possible remedies, the No. 2 *Mech Fail* (mechanical failure) light illuminated. Number 2 engine was secured without further incident – so far.

The crew assessed the situation. Loss of the MON-AC Bus would not allow the transfer of 6000 pounds of fuel in tank number two. This setback would necessitate a divert at this point to Kinloss, Scotland, as they would arrive at Keflavik below established and planned fuel minimums. Further assessment told them that they would be without horsepower gages, fuel quantity gages, UHF-1, VHF/VOR-2, VOR-1, ILS/LOC, ADF, HF-1, Inertial-1, forward windshield heat, external lights, and the HSI which provides both true and magnetic headings. They did have UHF-2 available and were able to contact Faroes Radar (Scotland) on Guard with their intentions. The divert to Kinloss was approved and the weather was above minimums with the wind gusting up to 35 knots, 40 degrees off runway heading.

As the now-nonfull systems *Orion* approached its new destination under darkness, a no-gyro GCA commenced. While descending through the clouds, the flight engineer utilized his flashlight to set the turbine inlet temperature, and the PPC and P2P were clearing the nonheated windshield of condensation and rapidly forming ice! Utility lights were available in the cockpit, but there were no reliable indications for oil, hydraulic or brake pressures, nor could the oil cooler flaps be controlled. Landing flaps were extended and visually checked. Approaching minimums, the PPC sighted the runway through his side window, and a somewhat difficult yet safe landing was completed without further incident.

This truly was quite an experience for not only the novice PPC but the entire crew of the P-3, particularly on this first pilot-in-command flight. The crew concept along with good solid judgment and NATOPS won out again. Maintenance revealed that the No. 2 generator had failed internally, but upon troubleshooting the MON-AC Bus, its failure "ground checked OK" and could not be duplicated. The Bus-that-could-not-fail *DID*, as attested by this believing crew. The causative factors of this failure may never be known, but the experience gained by the crew can be a lesson to all. Unlikely events often happen when they are least expected, let alone wanted. ◄

SHORT HOP

A DETACHMENT of three H-1 helicopters, the aircrews, and support personnel were assigned a 3-day mission to operate in a training exercise with SEAL and riverine forces.

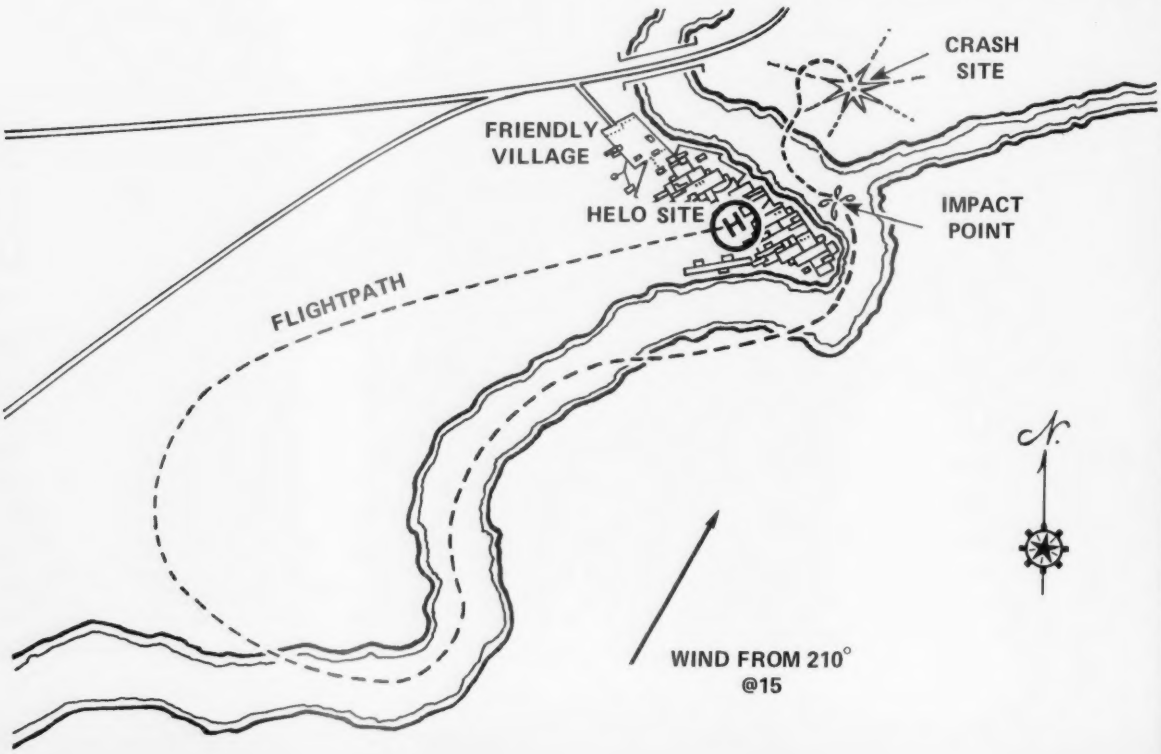
The exercise went as planned, and at the conclusion of the exercise, the detachment was to depart for Homeplate. On the morning of departure, the crews were up early, conducted their briefs, preflights, and launched just prior to 0800.

The plan was for all three helicopters to launch, rendezvous at 500 feet, form in loose trail, make a photo run over the boats, and land at AFB for refueling on the way to Homeplate.

After takeoff and rendezvous at 500 feet AGL, the flight formed in loose trail and began a descent for a low photo pass over the boats. Lead began his run, followed by No. 2 at an interval of 100-200 yards. Both Lead and No. 2 completed their runs uneventfully and made a climbing turn toward AFB. Number 3 began his run, and in a descending left turn to pass by the boats, the tail of the aircraft struck the water.

Immediately after impact, the pilot began a right, climbing turn toward the riverbank for a precautionary landing. The tail rotor and 90-degree gearbox departed the airframe at about 100 feet altitude. The pilot began autorotation, touched down on the right rear skid at about 15 knots ground speed, bounced once, and then the helicopter rolled over on its left side. It came to rest semi-inverted, supported by the rotor mast and the copilot's cockpit roof.

The pilots and three crewmen all exited the wreckage unassisted. No one was seriously injured although two of the crewmen, who were wearing gunner's belts, were thrown against the overhead when the aircraft turned

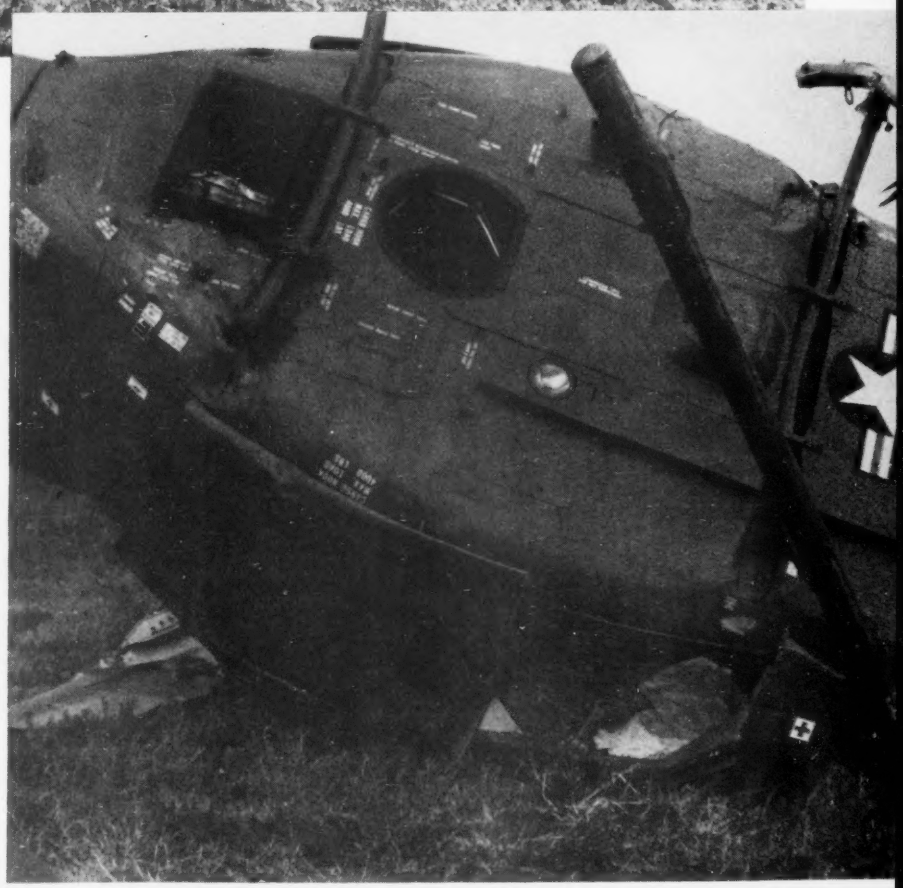


over. Lead and No. 2 quickly returned to the accident scene and lifted the crew to AFB for medical attention.

The pilots were NATOPS qualified, current, and in good physical shape. However, there were two factors which reared their heads. The crew had spent the night on pallets on the deck of a boathouse. They were constantly awakened by boatcrews entering and leaving the building. As a result they only received 3 or 4 hours of interrupted sleep. Additionally, the brief, while considered adequate, was less than those normally conducted by pilots of this squadron.

Whether the interrupted sleep and abbreviated brief caused the pilot to be too lackadaisical or not is mere conjecture. However, there is no doubt that he misjudged his altitude on the photo pass. There is no way to strike the tail rotor in the water unless the aircraft is *too low!*

The flight lasted 7 minutes, but it should take a little more time than that, at an ACM, to discuss the various ramifications of this mishap. ◄



Our Readers Respond

Operation Loosegoose

MCAS Boonieville – I had occasion some time ago to visit one of the helo squadrons for purposes of flight time. I checked in for a short night flight, but when the flight ended, I wondered why I had bothered.

I noticed when we turned up, there were no chocks – either under the gear or in the aircraft, and we were not a skid-equipped helo. After an uneventful flight, no lineman came to direct us to the line. The crew chief dispatched the first mech who had no wands, no flashlight, nothing. The pilot commented he couldn't even see the mech.

The pilot knew the ramp areas well, and there was just enough light for him to feel his way in. Why aren't crew chiefs required to be prepared for night landings in unfamiliar areas? This could be embarrassing someday, to say the least.

SSgt, USMC
H&MS

• Safety standdowns, squadron safety surveys, SOP, APPROACH articles, and Wing safety newsletters are all for naught when operations such as this are permitted. If something isn't done rather quickly by the operators in this MAG, they'll make the Weekly Summary soon. Speak to your ASO and "suggest" he follow up with a look at this outfit.

Re "Operation Loosegoose"

FPO, San Francisco – APPROACH, as usual, was an excellent compilation of safety, operational, and common sense information.

The letter in a recent issue *(see box – Ed.)* entitled "Operation Loosegoose" caught my attention and, as ASO of a Marine Aircraft Group, caused me to reflect on our Aviation Safety Program.

Our Group's mishap experience over the last 3 fiscal years has been analyzed with interesting results. Without exception, as the number of reported monthly incidents increases, the major aircraft accident rate decreases. The converse is also true. Is it valid then to assume that the reduction in the major aircraft accident rate is directly attributable to an increase in the number of reported incidents? I think not. There is, however, an apparent negative correlation between the two: reported aircraft incidents on the one hand and major aircraft accidents on the other.

We are confident that the rise of each is precipitated by a common denominator – communications. An increase in the effectiveness of our communications culminates in not only an increased reporting of incidents, but a decrease in major accidents. And we don't mean radio procedures. We're thinking in terms of a pilot, crewmember, mechanic, or "Staff Sergeant from H&MS" immediately reporting hazardous or questionable occurrences – communicating his experience to others so that we all learn and eventually benefit.

Each of our squadrons has only one commanding officer. Nevertheless, he relies heavily upon the experience, judgment, and initiative of each of his officers and staff NCOs in accomplishing the various missions assigned and maintaining a high degree of combat readiness. Likewise, squadrons have only one aviation safety officer. He also

relies on the sound judgment and professionalism of every squadron member to assist him in the execution of the duties of his office. He cannot possibly be everywhere all the time. Therefore, he depends upon others to take corrective action and notify him of unsafe practices without delay.

The atmosphere we are striving to perfect is one in which each and every pilot feels not only duty-bound, but free to discuss his "close calls" at All-Pilot Meetings; one in which linemen are not reluctant to explain to their supervisors and peers the errors of omission or commission that resulted from shortcuts taken, checklists not utilized, or hasty writeoffs.

The key to establishing this highly desirable atmosphere is the development of a continuous and free flow of communications within and between our squadrons.

Our success is attributed to the emphasis placed on the well established common denominator which links accident prevention with reporting – communications.

The observations made by the Staff Sergeant from MCAS Boonieville certainly highlighted an area of concern. I can't help but wonder what he did about it. Did he go to his officer-in-charge or aviation safety officer? Did he submit an Operational Hazard Report? Did he talk with anyone? Was the operating environment one in which the reporting of such occurrences was encouraged? I hope so.

He sets the time frame of the occurrence as "some time ago." Let's assume that means the previous month. It is very likely that the first time the Group's aviation safety officer became aware of the situation was upon receipt of your magazine, 4 months or more after the fact.

The editor's comment was probably correct in that: "If something isn't done rather quickly by the operators in this MAG, they'll make the Weekly Summary soon." I wonder what *he* did about it. Did he place a call to the unit's aviation safety officer? How about to the MAG's aviation safety officer? I hope so.

If the Staff Sergeant who originated "Operation Loosegoose" is a member of our H&MS, we have a weak link. Weak links cause accidents. If he's stationed elsewhere, they have what appears to be a well developed mishap potential in one of their squadrons. The horror is, they probably don't know it because the Staff Sergeant is not communicating. And, what's worse, the Naval Safety Center knows it – knows exactly which unit is involved – and liaison with other Marine Aircraft Group aviation safety officers has uncovered no evidence of notification by the Center.

We, in the aviation community, must take advantage of every opportunity to assist one another in the prevention of mishaps. When letters of this type reach your office, I suggest that a wise course of action would be to notify the unit involved so that timely action can be initiated to reduce the mishap potential. Perhaps this is already editorial policy. If so, I thank you. If not, kindly consider its implementation.

We enjoy APPROACH and find it to be a helpful and very professionally published magazine.

• We'll let you in on some information. Your Group was not the one involved. We receive hundreds of incident/UR messages each week, and we review every AAR for story value. With this unlimited flow of information, there is always grist for the safety publications mill. We write a story hoping to reach not only the outfit that reported it, but also many other outfits where it has happened and wasn't reported. Our purpose is to try to prevent it from happening again.

Nearly every article, Air Break, Anymouse, or Letter you read in APPROACH describes actual events. We do sanitize the material (change locations, direction of flights, names, etc.) to keep from embarrassing anyone. If there's story value in a mishap or several similar mishaps, we want to report what happened, not to whom it happened.

For example, if we had used the real location instead of MCAS Boonieville, we might lose a reader. But, by sanitizing the letter, it raises a question in many minds like "Was that us?"

We'd like to make a guess regarding your analysis of a possible relationship between reported incidents/URs and major accidents. Perhaps, the wide awake, gung-ho units that pour in incidents/URs mean that outfit is operating at 100 percent and isn't satisfied if their equipment isn't operating as designed.

It could mean that the work is performed by qualified troops who are well supervised and where QA is something more than a title. Finally, it could mean that maintenance procedures, aircraft handling, line operations, and flights are all conducted by SOP. Hence, lots of meaningful incidents/URs and no accidents.

Keep those cards and letters coming – you may help someone. ◄

Letters

Re: "Operation FLAILEX"

MCAS(H) New River – In the OCT '78 issue of APPROACH, a meaningful and realistic article, "Operation FLAILEX," addressed the hazards of shipboard helicopter operations during marginal weather conditions.

The article was written by a member of a CH-46 squadron about CH-46s and CH-53s. It vividly explained the situations that can easily come up during shipboard and offload operations that require long-hour flights. We hear no complaint about such a well written and truth-depicting article. What we would like to know is why an article about Marine helicopters depicts a photo of an Army CH-47 – an aircraft not in the Navy inventory.

Naval aviators are extremely proud of the aircraft they fly and enjoy reading articles specifically about their aircraft. Writing about aircraft and not showing correct pictorial presentations is a pride question.

LtCol K. C. Carlon
CO, HMH-362

• We overlooked that one. Thanks for bringing it to our attention. We are always in need of current aircraft photos. How about sending us some good action photos of your aircraft. Preferably black and white.

Re: "A Fatal Decision"

NAS – In the OCT '78 issue of APPROACH the article "A Fatal Decision" is not complete. You neglected to mention many factors involved, deleted parts of the tower tape transcript, and failed to take note of the flight leader's comment about the water gear.

The aircraft involved made what appeared to be a normal approach on the first pass, but made a go-around due to a streaming drag chute. On the downwind leg of the second pass there was discussion about an arrested landing. The flight leader's comment about the water gear was NOT in reference to any arresting gear, but to a lake. The tower was not informed of any difficulty (control problems), until the aircraft was through the 90 on the second approach. The aircraft's second approach appeared to be fast. The hook skipped the shortfield arresting gear, and with approximately 5500 feet remaining, both mainmounts blew. A shower of sparks appeared when the wheel assembly made contact with the runway.

Your tower tape transcript deleted the last two things on that recording:

• The flight leader's transmission after the aircraft involved had blown both mainmounts, "Tower, he is on fire."

• The sound of the ELT. It occurs approximately 5 to 8 seconds after the beginning of the flight leader's transmission.

Maybe I missed the whole point in that the fatal decision was made by the RIO when he unstrapped. But decisions are made on known information. Without all information, or erroneous information, it is difficult to make a good decision.

With a little more radio discipline, maybe the crew of this aircraft could have received more information. And just maybe the RIO would not have made the fatal decision.

ACC Orville P. McCoy
Operations Dept

Re: "Judgment Failed"

NAS Pt. Mugu – Concerning "Judgment Failed" in the NOV '78 issue of APPROACH magazine, I do not personally agree with all of the judgment errors cited. However, the point I would like to make in this letter is that certain changes to the present P-3 NATOPS manual could possibly prevent a future occurrence.

When the P-3 was introduced into the Navy, the NATOPS recommended approach flap reference speed was, like the Electra and most other aircraft, based on 1.3 times the approach flap stall speed. Several years later it was decided to change the reference speed for approach flaps to 1.35 times the approach flap stall speed. This was presumably done so that the recommended speed would agree with the approach index display which is set up for land flaps and just so happens to give a "doughnut" at 1.35 times the stall speed for approach flaps.

Several years later, a NATOPS change added an additional 5 KIAS to be maintained until visual contact with the runway. The airspeed on glidepath with approach flaps at 98,000 pounds is therefore approximately 10 KIAS greater than what would be considered safe or desirable for other aircraft. Although these extra 10 knots may or may not have made a difference in this accident, they certainly were unnecessary.

The P-3 NATOPS manual also requires that the GCA glidepath be flown with approach flaps, even though there may be instances of low visibilities and short runways which may dictate flying the glidepath with land flaps. It also recommended

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that land flaps not be used when weather is near GCA minimums, but it provides no means of computing landing ground roll with approach flaps.

I believe that approach flap reference speed should be changed back to 1.3 times approach flap stall speed and that extra speed only be recommended for wind and wind shear conditions. I also believe that the pilot should be given the option of flying the GCA glidepath with either approach flaps or land flaps. If approach flaps are used, then transitioning to land flaps for landing should be optional regardless of weather conditions. Certainly, the NATOPS manual should provide a means of computing ground roll for approach flaps.

LCDR William Rakowski
VP-65

• If your command feels a NATOPS change is in order then you should submit a routine change for the next conference.

Attitudes and Safety They Go Hand in Hand

NAS Norfolk – A safety program cannot be something that is imposed on your squadron or organization. Safety must be *built* into every facet of the organization. It must be an integral part of your daily operations.

The prevention of accidents, incidents, and injuries is basically achieved by controlling the work environment and thereby controlling, indirectly, each individual's attitude. Only top management can implement such control.

A squadron which has an effective safety program will have a working environment in which operations can be conducted economically, efficiently, and safely.

Each command's attitude and approach toward safety and accident prevention are almost invariably reflected by the attitudes of the supervisory force. Thus, the workers' attitudes are usually the same as the supervisors. If top management is not genuinely interested in the safety program, no one else is likely to be. This basic fact applies at all levels of management and supervision. If cooperation and participation are to be obtained from all hands, safety awareness must result from management's announced and demonstrated interest.

By definition, an attitude is a point of view based on a strongly held conviction or belief. If any supervisor only partly understands his own attitudes, he knows even less of other's real attitudes.

It is easy to become angry with those whose beliefs are different from one's own. The answer is to try to understand people, as individuals, their interests, and especially what motivates them. People usually change attitudes only when they understand the reason why they should change, *and want to*. The fact is, attitudes usually change slowly at best. People resist change even when it's for their own good.

How can we effect a change in attitude? In one word, leadership. It would be a terrible mistake to think that enforcement by threat of punishment alone is the method to use in order to achieve the end result. At best, punitive discipline can establish only minimum standards of performance. Outstanding performance comes only when a person wants to produce and when he has the ability to do so.

It seems unfair that many work injuries are charged to the supervisors. A supervisor can truthfully say, "I can't watch everybody every minute." He is correct. However, attitude studies have shown that a person's attitudes toward his job and safety are identical with his attitudes toward his immediate supervisor. The supervisor and his attitudes make him the key man in safety.

In summary, by educating supervisors at all levels, one ensures a favorable attitude by the troops toward their work. A safe environment can be established, and the desired result – an efficient organization with safety awareness – is evidenced.

AMH1 C. M. Blair
VAW-124

Re: "Problem? Holler Mayday!"

Jacksonville, NC – I just finished reading your article about the *Harrier* driver who sucked up a bird after takeoff and had to punch out. ("Problem? Holler Mayday!" DEC '78 APPROACH.)

I was surprised to see that you saw fit to give the pilot a slap on the hand in the last paragraph when you scolded him for not transmitting a Mayday. Sure, the SAR mission might have gone a little more smoothly if he had made that transmission, but let's not overlook the pecking order of aviate, navigate, communicate.

According to your recount of what happened, this pilot demonstrated the presence of mind to secure and relight his engine (at 1000 feet and 300 knots). That's aviating! Then, at 800 feet and 190 knots, he turned his bird away from a populated area and pointed it at an oyster bar. That's navigating! How many families enjoyed a tragedy-free holiday because of that piece of headwork? And at 500 feet he punched out.

What might have been the outcome if he had taken that extra bit of time to blurt out his position? He might have just been telling the SAR bird where to pick up the body or bodies. As it turned out, he followed the third step of that tried and true emergency procedure by marking his position with one of the orange panels from his parachute.

The pilot is testimony to the importance of keeping these priorities in line. He has taught us all a lesson which should be brought to bear as exemplary in Bravo Zulu, rather than implying that he was negligent.

1stLt Kim E. Harders, USMC

FLEET WEEK

FPO, New York – We were minor participants in a recent carrier fleet week. Our flight to overhead the carrier was uneventful and we were looking forward to "bagging" a few. We checked in with Marshal, and as soon as they heard our *Hoover* call sign, we were directed to Marshal. Do not pass go. Do not "bag" traps.

After what seemed an eternity, we got our charlie and proceeded to the break. The landing evolution went smoothly and after we had accumulated two T&G and a couple of traps, we were directed aft of the island and told to fold our wings for a hot pump. As we started refueling, the flight deck officer motioned for permission to enter the aircraft. When he came in he showed us a flashlight which one of his yellow shirts had seen drop from our wing fold area. Needless to say, we were concerned and had a little trouble getting the egg off our faces. The light was clearly labeled and belonged to our squadron's airframes shop. We thanked the officer and cowered up to the cat for our shot home.

After we landed, an investigation revealed that the flashlight had been an unwanted passenger on three previous flights. The S-3A is a many-systemed aircraft, two engines, redundant flight controls, and emergency systems. However, jammed flight controls in the wing fold area could ruin your whole day.

How is your tool control program? Ours is super – now.

*Hoover*head

approach

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